

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
30 September 2004 (30.09.2004)

PCT

(10) International Publication Number  
**WO 2004/083541 A3**

(51) International Patent Classification<sup>7</sup>: **B29C 47/02**,  
B27N 3/28, B29C 47/00

(21) International Application Number:  
PCT/NL2004/000189

(22) International Filing Date: 16 March 2004 (16.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
1022946 - 17 March 2003 (17.03.2003) NL  
60/459,167 31 March 2003 (31.03.2003) US

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,

PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-  
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,  
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

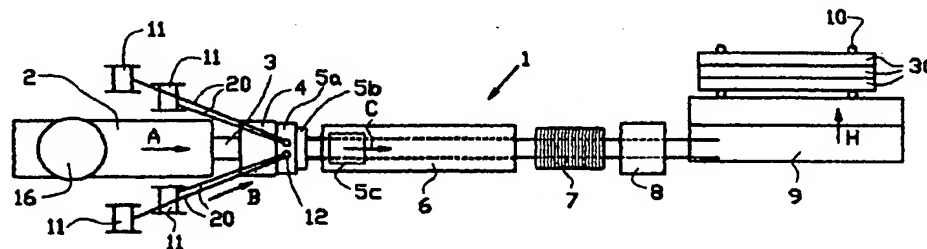
— as to applicant's entitlement to apply for and be granted  
a patent (Rule 4.17(ii)) for the following designations AE,  
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,  
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,  
EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,  
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM,  
PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,  
TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,  
ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD,  
SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY,  
KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG,  
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,  
LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF,  
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,  
TD, TG)

**Published:**

— with international search report  
— before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

[Continued on next page]

(54) Title: **REINFORCED PROFILE**



(57) Abstract: A method for manufacturing a compound construction element, in an extrusion process wherein a composite material is pressed through an extrusion die, which composite material includes a matrix of thermoplastic synthetic material including wood particles or other, cellulose containing particles in a content on the order of 50 % by weight or more, wherein also one or more elongated additional elements are passed through the extrusion die, which additional elements are brought into tight engagement with the composite material, after which the compound element is shaped and preferably cooled in a die.

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WO 2004/083541 A3



**(88) Date of publication of the international search report:**  
11 November 2004

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/NL2004/000189

### A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B29C47/02 B27N3/28 B29C47/00

According to International Patent Classification (IPC) or to both national classification and IPC

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B29C B27N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CA 907 491 A (BINEK A) 15 August 1972 (1972-08-15)  page 1, line 23 - line 25 page 2, line 23 - line 31 page 3, line 22 - line 31 page 5, line 10 - line 25 page 6, line 10 - line 12 page 8, line 18 - line 22 claims; figure 6	1-4, 8-23, 27, 30-33
Y		5-7, 24-26, 28, 29, 34-41

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

1 September 2004

Date of mailing of the international search report

09/09/2004

Name and mailing address of the ISA

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International Application No  
PCT/NL2004/000189

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2001/019749 A1 (GODAVARTI SHANKAR ET AL) 6 September 2001 (2001-09-06)  abstract paragraph '0002! paragraph '0008! - paragraph '0012! tables 1,3,10 paragraph '0029! paragraph '0051! claims 1-4; figures	5-7, 24-26, 28,29, 34-41
Y	EP 1 172 404 A (TECH WOOD INTERNAT LTD) 16 January 2002 (2002-01-16)  page 3, line 21 - line 27 page 4, line 20 - line 21 page 8, line 27 - line 44 claims 1-12; figures 1,3	1,3,4, 8-25, 27-31
Y	US 2002/192431 A1 (EDGMAN THOMAS J) 19 December 2002 (2002-12-19)  page 1, paragraph 5 page 2, paragraph 25 - paragraph 26 page 3, paragraph 31 - paragraph 32 figures 2,3,6	1,3,4, 8-25, 27-31
A	US 6 322 731 B1 (PAGDEN KENNETH LINDSAY) 27 November 2001 (2001-11-27) column 4, line 13 - line 17 column 5, line 46 - line 61 column 8, line 7 - line 24 claims 1-6; figures 1,5	1,8-20, 30,31
A	EP 0 820 848 A (GEN ELECTRIC) 28 January 1998 (1998-01-28) the whole document	1,30,31
A	US 5 866 051 A (LEE SHYN-YANG ET AL) 2 February 1999 (1999-02-02) example 1	1,30,31

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/NL2004/000189

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
CA 907491	A	15-08-1972	NONE	
US 2001019749	A1	06-09-2001	US 6265037 B1	24-07-2001
			AU 2618800 A	02-11-2000
			CA 2368201 A1	26-10-2000
			EP 1173512 A1	23-01-2002
			JP 2003517501 T	27-05-2003
			WO 0063285 A1	26-10-2000
			US 2001051242 A1	13-12-2001
			US 2001051243 A1	13-12-2001
EP 1172404	A	16-01-2002	WO 9634045 A1	31-10-1996
			EP 1172404 A1	16-01-2002
			ES 2185702 T3	01-05-2003
			AT 226609 T	15-11-2002
			AU 2319695 A	18-11-1996
			DE 69528669 D1	28-11-2002
			DE 69528669 T2	03-07-2003
			DK 830424 T3	24-02-2003
			EP 0830424 A1	25-03-1998
US 2002192431	A1	19-12-2002	US 2004131828 A1	08-07-2004
US 6322731	B1	27-11-2001	AU 5037698 A	20-08-1998
			AU 739360 B2	11-10-2001
			AU 5848598 A	08-09-1998
			WO 9835811 A1	20-08-1998
			BR 9807415 A	21-03-2000
			CA 2281665 A1	20-08-1998
			CN 1130283 B	10-12-2003
			DE 69808306 D1	31-10-2002
			EP 1007322 A1	14-06-2000
			HK 1024885 A1	04-04-2003
			JP 2001524889 T	04-12-2001
			NZ 337280 A	26-01-2001
			RU 2181081 C2	10-04-2002
			TR 9902417 T2	22-05-2000
			ZA 9801150 A	20-08-1998
			HU 0000855 A2	28-08-2000
			ID 22903 A	16-12-1999
EP 0820848	A	28-01-1998	US 5779961 A	14-07-1998
			DE 69712420 D1	13-06-2002
			DE 69712420 T2	09-01-2003
			EP 0820848 A1	28-01-1998
			ES 2176622 T3	01-12-2002
			JP 10113974 A	06-05-1998
			SG 60090 A1	22-02-1999
US 5866051	A	02-02-1999	DE 19818322 A1	19-11-1998
			IT T0980309 A1	11-10-1999